

In the Claims

This listing of claims replaces all prior versions and listings of claims:

1. (Currently Amended) A secondary battery comprising:

a positive electrode;

a negative electrode; and

an electrolyte;

wherein the positive electrode includes a positive electrode mixture layer capable of occluding and releasing light metal;

wherein the negative electrode includes a negative electrode mixture layer capable of occluding and releasing light metal;

wherein a charge capacity of the negative electrode is expressed by a sum of a first capacity component by occluding and releasing light metal and a second capacity component by precipitating and dissolving light metal on said negative electrode at charging voltages below overcharging;

wherein a ratio (A/B) of a thickness A of the positive electrode mixture layer and a thickness B of the negative electrode mixture layer is 1.186 or more;

wherein the thickness A of the positive electrode mixture layer and the thickness B of the negative electrode mixture layer lies within a range of 80 μm to 250 μm , inclusive;

wherein the negative electrode mixture layer contains a carbonaceous material;

wherein a charge capacity of the positive electrode is larger than the first charge capacity component of the negative electrode expressed by occluding and releasing light metal;

wherein, when a voltage of the battery is lower than an overcharge voltage of the

battery during charging of the battery, the light metal precipitates on a surface of the negative electrode after the charge capacity of the negative electrode has been exceeded;

wherein the electrolyte contains a main nonaqueous solvent selected from the group consisting of ethylene carbonate, propylene carbonate, diethyl carbonate, methyl ethyl carbonate, and any mixture thereof; and

wherein the main nonaqueous solvent makes up a majority of the electrolyte by mass percent.

2-3. (Cancelled)

4. (Original) A secondary battery as claimed in claim 1, wherein the negative electrode mixture layer contains graphite.

5. (Original) A secondary battery as claimed in claim 1, wherein the light metal includes lithium.

6. (Original) A secondary battery as claimed in claim 1, wherein the electrolyte contains LiPF_6 .

7. (Previously Presented) A secondary battery as claimed in claim 1, wherein the electrolyte contains an electrolytic salt, where the concentration of the electrolytic salt in the nonaqueous solvent is 2.0 mol/kg or less.

8-12. (Canceled)

13. (Currently Amended) A secondary battery comprising:

a positive electrode;

a negative electrode; and

an electrolyte;

wherein the positive electrode includes a positive electrode mixture layer capable of occluding and releasing light metal,

wherein the negative electrode includes a negative electrode mixture layer capable of occluding and releasing light metal,

wherein a charge capacity of the negative electrode causes lithium to precipitate on the negative electrode before charging of the secondary battery is completed,

wherein a ratio (A/B) of a thickness A of the positive electrode mixture layer and a thickness B of the negative electrode mixture layer is 1.186 or more;

wherein each of the thickness A of the positive electrode mixture layer and the thickness B of the negative electrode mixture layer lies within a range of 80 μm to 250 μm , both inclusive;

wherein the negative electrode mixture layer contains a carbonaceous material;

wherein a charge capacity of the positive electrode is larger than ~~the a first~~ charge capacity component of the negative electrode expressed by occluding and releasing light metal;

wherein the electrolyte contains a main nonaqueous solvent selected from the group consisting of ethylene carbonate, propylene carbonate, diethyl carbonate, methyl ethyl carbonate, and any mixture thereof; and

wherein the main nonaqueous solvent makes up a majority of the electrolyte by mass percent.

14. (Currently Amended) A secondary battery comprising:

a positive electrode;

a negative electrode; and

an electrolyte;

wherein the positive electrode includes a positive electrode mixture layer capable of occluding and releasing light metal, wherein the negative electrode includes a negative electrode mixture layer capable of occluding and releasing light metal, wherein a charge capacity of the negative electrode causes lithium to precipitate on the negative electrode when an open circuit voltage of the battery is lower than an overcharge voltage, wherein a ratio (A/B) of a thickness A of the positive electrode mixture layer and a thickness B of the negative electrode mixture layer is 1.186 or more;

wherein each of the thickness A of the positive electrode mixture layer and the thickness B of the negative electrode mixture layer lies within the range of 80 μm to 250 μm , both inclusive;

wherein the negative electrode mixture layer contains a carbonaceous material;

wherein a charge capacity of the positive electrode is larger than ~~the~~ a first charge capacity component of the negative electrode expressed by occluding and releasing light metal;

wherein the electrolyte contains a main nonaqueous solvent selected from the group consisting of ethylene carbonate, propylene carbonate, diethyl carbonate, methyl ethyl carbonate, and any mixture thereof; and

wherein the main nonaqueous solvent makes up a majority of the electrolyte by mass percent.

15. (Previously Presented) A secondary battery as claimed in claim 4, wherein the negative electrode mixture layer includes natural graphite.

16. (Previously Presented) A secondary battery as claimed in claim 13, wherein the carbonaceous material includes natural graphite.

17. (Previously presented) A secondary battery as claimed in claim 14, wherein the carbonaceous material includes natural graphite.